CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/PC/W.No.02/CSR-06/361b/CEMENT/2017-18 Date: 15.06.2017

TEST REPORT ON CEMENT

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
* Name of Work	:	Improvements to Roads and Drains at Chowdeshwari Layout in Ward No.02, Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Cement
Sample Received on	:	13.06.2017
Period of Testing	:	13.06.2017 to 15.06.2017

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988 (RA-2014)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	180 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	490 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988 (RA-2014)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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VIDYARANI P.K.
Technical Manager

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T-2377

Job No.: CTCE/BBMP/PC/W.No.02/CSR-06/361b/SAND-Gradation/2017-18 15.06.2017

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
* Name of Work	: Improvements to Roads and Drains at Chowdeshwari Layout in Ward No.02, Yelahanka Sub Division, BBMP, Bangalore.
* Reference	: EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	: Fine Aggregates
Technical Reference	: IS : 2386 (Part 1) - 1963 (RA-2011)
Sample Received On	: 13.06.2017
Date of Testing	: 15.06.2017

Total Wt. of Aggregates in gms = **1000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.00	90-100	90-100	90-100	95-100
2.36	76.00	60-95	75-100	85-100	95-100
1.18	56.50	30-70	55-90	75-100	90-100
600 Micron	37.50	15-34	35-59	60-79	80-100
300 Micron	25.00	5-20	8-30	12-40	15-50
150 Micron	6.80	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-II specific limits.

Civil-Tech Consultants & Engineers Bangalore

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Job No. CTCE/BBMP/PC/W.No.02/CSR-06/361b/AGG/GR/2017-18 15.06.2017

TEST REPORT ON SIEVE ANALYSIS OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
* Name of Work	:	Improvements to Roads and Drains at Chowdeshwari Layout in Ward No.02, Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Coarse Aggregates (40mm)
Technical Reference	:	IS : 2386 (Part 1) -1963 (RA-2011)
Sample Received on	:	13.06.2017
Date of Testing	:	15.06.2017

Total Wt. of Aggregates in gms= **5000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.00	95-100	85-100
20	41.00	30-70	0-20
10	15.96	10-35	0-5
4.75	2.86	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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Job No.: CTCE/BBMP/PC/W.No.02/CSR-06/361b/Cube/2017-18

19.07.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
* Name of the work	:	Improvements to Roads and Drains at Chowdeshwari Layout in Ward No.02, Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Road Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	19.07.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.06.2017	19.07.2017	8.135	479.3	21.30
2	21.06.2017	19.07.2017	8.295	506.4	22.51
3	21.06.2017	19.07.2017	8.325	528.9	23.51

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T-2377

Job No.: CTCE/BBMP/PC/W.No.02/CSR-06/361b/Cube/2017-18 19.07.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
* Name of the work	:	Improvements to Roads and Drains at Chowdeshwari Layout in Ward No.02, Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Road Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	19.07.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.06.2017	19.07.2017	8.098	474.5	21.09
2	21.06.2017	19.07.2017	8.190	502.2	22.32
3	21.06.2017	19.07.2017	8.253	513.6	22.83

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* Agency	:	**Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
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* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Road Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{30}
Compressive Strength as on	:	28th day
Sample Received on	:	19.07.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.06.2017	19.07.2017	8.265	506.5	22.51
2	21.06.2017	19.07.2017	8.329	512.4	22.77
3	21.06.2017	19.07.2017	8.455	525.8	23.37

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Job No.: CTCE/BBMP/PC/W.No.02/CSR-06/361b/Cube/2017-18 21.07.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
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* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Road Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	21.07.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	23.06.2017	21.07.2017	8.159	482.3	21.44
2	23.06.2017	21.07.2017	8.293	496.5	22.07
3	23.06.2017	21.07.2017	8.305	506.1	22.49

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21.07.2017

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* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
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* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Road Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{30}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	21.07.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	23.06.2017	21.07.2017	8.178	482.3	21.44
2	23.06.2017	21.07.2017	8.286	493.5	21.93
3	23.06.2017	21.07.2017	8.324	506.4	22.51

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
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* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Road Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28th day
Sample Received on	:	21.07.2017

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	23.06.2017	21.07.2017	8.119	506.5	22.51
2	23.06.2017	21.07.2017	8.230	513.2	22.81
3	23.06.2017	21.07.2017	8.360	525.4	23.35

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Job No. CTCE/BBMP/PC/W.No.02/CSR-06/361b/Precast slab/2017-18

28.06.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CORE

* Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. P. Channakrishna,** No.152, 2nd Block, 3rd Stage, Sanegoravanahalli, Rajajinagar, Bangalore.
* Name of work	:	Improvements to Roads and Drains at Chowdeshwari Layout in Ward No.02, Yelahanka Sub Division, BBMP, Bangalore.
* Reference	:	EE(YNK.D)E-PMT-08/W.O/51/2017-18 Dated: 25.05.2017
* Sample ID	:	Precast slab
* Grade of Concrete	:	M_{15}
Techinical Reference	:	IS:516-1959 (RA- 2013), SP-24:1983.
Sample Received on	:	23.06.2017
Date of Testing	:	28.06.2017

Sl. No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	78.00	0.386	2520.36	1.56	0.952	22.65	11.54	12.46	13.08	16.35
2	50.00	79.00	0.392	2527.14	1.58	0.955	26.90	13.70	14.80	14.12	17.66
3	50.00	80.00	0.399	2540.11	1.60	0.957	27.25	13.88	14.99	14.34	17.93

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